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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|----------------------------------|-------------|----------------------|---------------------|------------------|
| 09/705,844 | 11/06/2000 | Mitsuaki Oshima | 2000 1524 | 5657 |
| 513 | 7590 | 11/15/2006 | EXAMINER | |
| WENDEROTH, LIND & PONACK, L.L.P. | | | HA, DAC V | |
| 2033 K STREET N. W. | | | | |
| SUITE 800 | | | | |
| WASHINGTON, DC 20006-1021 | | | ART UNIT | |
| | | | PAPER NUMBER | |
| | | | 2611 | |

DATE MAILED: 11/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/705,844

Applicant(s)

OSHIMA, MITSUAKI

Examiner

Dac V. Ha

Art Unit

2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 98-109.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 98-109 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 98-109 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This office action is in response to the RCE filed on 10/13/06.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 98-109** are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura et al. (US 5,168,509) (hereafter Nakamura).

Regarding claims 98, 100, Nakamura discloses the claimed subject matter "a modulator operable to modulate ... integer" in Fig.3, elements 11, 14; "a transmitter ... demodulated data stream" in Fig. 3, element 15. Nakamura differs from the claimed invention in that Nakamura doesn't teach "wherein the modulator is operate to select a value of n from a plurality of values of n according to a transmission condition". However, since the "level" of the modulation is selective, (col. 1, lines 34-35; col. 4, lines 26-35) it would have been obvious to one skilled in the art that some kind of mechanism, as a design choice, would be utilized of such selection. Further, Nakamura suggests that the quality of the transmission would dictate the selection of "n" (col. 4, lines 26-35).

Regarding claims 99, 101, the claimed subject matter "wherein ... condition" would have been optional.

Regarding claims 102-109, see claims 98-99, collectively.

Response to Arguments

4. Applicant's arguments filed on 10/13/06 have been fully considered but they are not persuasive.

Applicant has argued in the response filed on 10/13/06 "The Nakamura patent is directed to ... modulation system of Nakamura" (pages 7-8 of the REMARKS).

Nakamura, however as mentioned before, has recognized that the level of QAM could be selected to be different (col. 1, lines 34-37). Even though Nakamura doesn't disclose "the modulator is operate to select a value of n from a plurality of values of n ", Nakamura suggests that the selection of appropriate QAM level has to be made and that selection depends on each specific application requirements, data sources, resources, etc (col. 4, lines 26-35; col. 5, lines 35-42). Nonetheless, upon recognizing such concept, a person of ordinary skill in the art at the time of the invention, i.e. to accommodate for the growing demand and requirement of each particular system, would have resorted to device the system with the capability of adaptively selecting the QAM level, so that one would not have to provide many different separate systems just because of different QAM level required. Moreover, Nakamura suggests that in one scenario, the channel quality would dictate the selection of " n " used from modulation (col. 4, lines 26-35).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dac V. Ha whose telephone number is 571-272-3040. The examiner can normally be reached on 5/4.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on 571-272-3086. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read 'Dac V. Ha', with a long horizontal flourish extending to the right.

Dac V. Ha
Primary Examiner
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